Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of	)	
	)	
Administration of the	)	CC Docket No. 92-237
North American Numbering Plan	)	

GTE COMMENTS

GTE Service Corporation,
on behalf of its affiliated telephone
operating companies and
GTE Mobile Communications

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SUMMARY

GTE welcomes the Commission's Inquiry into various issues raised by the National Association of Regulatory Utility Commissioners' Petition. GTE approaches numbering issues from both a local exchange carrier's perspective and a cellular provider's perspective. GTE has been an active participant in the various domestic and international fora addressing the many issues raised by numbering.

GTE has always encouraged a well-documented and equitable process to make numbering resources available to those who need them. GTE recognizes that there has been a growing concern from many industry segments over Bellcore -- as the North American Numbering Plan Administrator ("NANPA") -- making policy decisions that impact all facets and all participants of the industry. The time is ripe for the Commission to undertake a review of the proper forum to establish administrative policy, procedure, and assignment guidelines. This review should initially examine all proposals, including use of existing standards bodies and other fora as well as creation of a new group. GTE desires a national policy mechanism that also evaluates international ramifications. The ultimate choice must be equitable, represent all industry segments, have technical competence, and be supported financially by all segments of the industry.

Rather than moving the NANPA, the Commission may also want to consider "fixing" any problems it discovers in the current process. Pending the Commission's overall review, it may also wish to provide interim guidance. Clear

and concise designation or limitation of the NANPA's authority is essential. Where the industry cannot achieve consensus, GTE would philosophically support the Alternative Dispute Resolution concept, however, GTE would like to see the details of such a proposal before committing to it.

GTE is actively working on numbering issues for Personal Communications Services ("PCS") and supports PCS numbering resources being part of the NANP. GTE supports both the "home-based" and "country-based" plans, and, thus far, sees no benefits in the "prefix" scheme. GTE believes PCS providers should have the option to implement their service under either of both of the GTE-supported plans. PCS is only beginning to be defined and GTE recommends the FCC participating in a monitoring role while the domestic and international standards bodies work out their guidelines. GTE supports a competitive environment where providers have access to customers and customers can change providers and maintain the same number(s). A lack of number portability will prove to be a great inconvenience to PCS customers.

With regard to local number portability, all numbers must be non-switch associated which will require a data base look-up on all calls. This could exceed the capacity of existing networks. GTE agrees that local number portability is extremely attractive to both customers and competitive local access providers and is aware that in the future it will be available. However, it requires further planning and analysis before it can be implemented. The industry must be allowed to develop this functionality in a timely manner in order to avoid excessive costs and network inefficiencies. In the interim, some limited number portability can be provided.

The expansion of Carrier Identification Codes ("CIC") to four digits creates technical problems for local exchange carriers ("LEC"). Expanding the CIC to four digits causes increased cost for a LEC. It is imperative that any conversion be accomplished in a minimum amount of time to limit conversion costs -- eighteen months as the absolute maximum. The pressure for expansion can be reduced if codes are reclaimed, and GTE strongly feels codes obtained through mergers and acquisitions should count against the total any entity is allowed to have.

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GTE Service Corporation, on behalf of its affiliated telephone operating companies and GTE Mobile Communications ("GTE"), hereby submits its Comments on the Commission's Notice of Inquiry ("NOI"), FCC 92-470, released on October 29, 1992, in the above-referenced docket. This NOI was prompted by a Petition for Notice of Inquiry ("Petition") filed by the National Association of Regulatory Utility Commissioners ("NARUC") on September 26, 1991, requesting that the Commission begin an Inquiry into various aspects of the North American Numbering Plan ("NANP") and its administration.[1] Although the Petition requested an Inquiry on numerous issues, the Commission has chosen to address only those associated with the overall administration of the NANP, personal communications services ("PCS"), local number portability, and Feature Group D ("FGD") Carrier Identification Code ("CIC") expansion.

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1 Since GTE controls telephone companies that are within North America but outside the United States, GTE is also concerned about the international ramifications of this Inquiry. While U.S. Numbering Administration ("USNA") may ultimately fall under the FCC's jurisdiction, certain aspects of the North American Numbering Plan and its administration are clearly outside the Commission's jurisdiction. GTE will generally use the term NANP to refer to the current overall program, and USNA if the context requires a more precise focus addressing activities that are within the FCC's jurisdiction.

BACKGROUND

On January 1, 1984, because of divestiture and implementation of the Modified Final Judgment ("MFJ"), the administration of the NANP was transferred from American Telephone and Telegraph Company ("AT&T") to an organization now known as Bell Communications Research Corporation ("Bellcore"), an entity owned by the seven Regional Bell Operating Companies ("RBOCs"). The Bellcore NANP Administrator ("NANPA") oversees the administration of numbering in World Zone 1 which comprises eighteen nations including the United States, Canada, Bermuda, and most of the Caribbean. The NANPA does not presently have the responsibility for assigning Central Office codes ("NNXs" or "NXXs") within a Numbering Plan Area ("NPA")[2] with the exception of NPA 809, and Service Access Codes ("SAC") 800 and 900. NPA 809 covers the Caribbean, and the SAC 800 is used for a service once called Inward Wide Area Telephone Service ("INWATS") and now known as 800 Service, where the called party pays for the call. The 900 SAC is used for Pay-per-call services. Within the remaining NPAs, the Central Office code administration responsibility generally resides with the local exchange carrier ("LEC") providing most of the service within a geographic Area Code.

The NANPA views its responsibilities to include: administering the resources fairly and impartially to the mutual benefit of users and service providers in World Zone 1; working cooperatively with standards bodies, industry forums, national and international organizations, and appropriate government

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2 The Numbering Plan Area Code is referred to both as an "NPA" or "Area Code."

agencies to seek and implement consensus on NANP administrative procedures and design changes; ensuring that code conservation techniques are employed in the assignment and utilization of NANP resources; seeking to ensure the availability of NANP resources for legitimate applications; adapting the NANP to the changing requirements of the telecommunications industry users and service providers; and representing the NANP interests to national and global standards and telecommunications bodies.[3]

The NANPA coordinates with the Canadian Department of Communications on Canadian numbering issues, while the Caribbean administrations "participate in the discussion of numbering issues involving their respective countries on an 'as needed' basis . . . ."[4] In the United States, the FCC has stated that it has plenary jurisdiction over the administration of the NANP.[5] Since "most numbering plan issues have been resolved through industry negotiations and forums,"[6] the Commission's major involvement with numbering plan issues has been restricted to disputes brought before it for resolution.

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3 Bellcore, North American Numbering Plan Administrator's Proposal on the Future of Numbering in World Zone 1, January 2, 1992, at 5-6.

4 Id., at 5.

5 See 2 FCC Rcd 2910 at 2912.

6 NOI at para. 6.

INTRODUCTION

GTE appreciates this opportunity to further comment on particular numbering issues outlined in the NARUC Petition and set forth for comment by the NOI. Every effort will be made to assist the Commission and the industry by providing useful input that promotes a better understanding of the issues raised in the NOI and the requirements for resolution of these issues. The proper administration of limited numbering resources that form the basis of World Zone 1's telecommunications infrastructure is a major issue facing the industry today.

GTE's response to these important issues will include both a local exchange telephone company's and a cellular provider's perspective. GTE Telephone Operations and GTE Mobile Communications have been active participants in industry fora and other activities which are addressing numbering issues referenced in the NOI: Some of these fora and activities include: the Central Office Code Guideline Forum ("COCGF") sponsored by the NANPA until recently and now sponsored by the Industry Carriers Compatibility Forum ("ICCF"); Long Range Numbering Plan ("LRNP") released by the NANPA; ICCF Workshop on Personal Communications Services ("PCS") N00 code assignment guidelines; Carrier Liaison Committee ("CLC") NANP Resource Management Task Force; Exchange Carriers Standards Association ("ECSA") Committee T1P1 subworking group on Universal Personal Telecommunications ("UPT") Numbering, Addressing, and Routing; United States Department of State Study Group "A" and Ad Hoc Study Group "A" on UPT numbering; and International Telegraph and Telephone Consultative Committee ("CCITT") Study Group II addressing UPT Numbering Recommendation E.168.

In the United States, GTE Telephone Operations has a unique position for a non-RBOC LEC, it is the administrator of Central Office codes in two NPAs (813 in Florida and 808 in Hawaii) and an applicant for Central Office codes in thirty-eight other states. Additionally, subsidiaries in Canada and the Dominican Republic utilize NANP resources. GTE's cellular subsidiaries serve over 80 metropolitan areas in twenty-four states and are licensed to manage over 40 rural areas. Given this unique situation, GTE would be greatly impacted by any changes in the administration of the NANP.

DISCUSSION

(PHASE ONE OF THE NOI)

OVERALL ADMINISTRATION OF THE NANP

GTE has always believed that a well-documented and equitable process for making numbering resources available to those who need them, is more critical than who administers the actual assignment of numbers.[7] GTE, thus, does not object to Bellcore's retention of a role both in USNA and NANP administration. However, there continues to be a growing concern from many industry segments over Bellcore -- as NANPA -- making policy decisions that impact all facets and all participants of the industry. The time is ripe for the Commission to undertake a review of the proper forum to establish administrative policy, procedure, and assignment guidelines, and possibly relieve Bellcore of these "policy" issues. This review could encompass many various proposals. Use of the existing standards bodies and other fora should be one

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7 See GTE Comments filed December 20, 1991 in response to the Petition, at 8 ("GTE NARUC Comments") and NOI at footnote 43.

option to be evaluated. A new industry advisory group could be another option to be explored.[8] Although a greater role for the Commission has also been advocated by some, in the past, the FCC has shifted numbering tasks out of the Commission to industry.[9] Although state commissions need to participate in activities concerning numbering resources, GTE believes a national policy mechanism that also evaluates international ramifications would be required.[10]

Mechanisms that are considered must be equitable, and represent all industry segments. Funding itself is an issue. Technical competence is a major concern. The Commission recognized "that the numbering plan has been administered over a long period of time with considerable skill and foresight."[11] The complexity of the activities performed by the NANPA in providing "a uniform dialing scheme applicable to eighteen countries, more than a thousand local exchange carriers, several hundred long distance carriers, and more than a hundred million end users"[12] is not a task that could be assumed easily by another entity. In addition, nearly 500 cellular carriers (1,277 licensees) and

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8 The FCC notes that the Canadian Department of Communications formed a Steering Committee on Numbering to address a variety of numbering issues. See NOI footnote 6.

9 At one time the FCC assigned Data Network Identification Codes ("DNICs"). The Commission shifted much of this assignment task to the industry, only involving Commission resources in rare cases. See 104 FCC 2d 208 (1986).

10 In the Cellular Interconnection Order II the Commission stated: "[A]ny state regulation of this national resource could substantially affect interstate communications by disrupting the uniformity of the NANP." See 2 FCC Rcd at 2912.

11 NOI at para. 23.

12 Id.

more than ten million cellular subscribers benefit from the same uniform numbering scheme.

Criticisms of the NANPA make it clear that it is not a perfect organization. But criticism alone does not warrant moving the responsibility elsewhere. In fact, if the administration of the NANP were given to another entity, there is no guarantee that any improvement would result. Quite the opposite could occur. Any new organization assigned the responsibility of administering the NANP would have a serious learning curve acquiring the knowledge that is resident in Bellcore today. And during this learning curve, the industry could be subject to delays and errors which could prove costly and disruptive to all telecommunications services worldwide. Particularly between now and January 1995 when there is a critical shortage of numbers, any change in the residence of the NANPA before implementation of Interchangeable NPAs ("INPAs") may be detrimental to the provision of basic telecommunications services. It may be better to correct what is wrong with the present administration of the NANP than to start anew.

Rather than moving the administration of the NANP to another entity, GTE recommends improvements to the areas of responsibility and authority that have been imposed on the existing NANPA. This approach would allow for change rather than disruption. GTE firmly believes that many of the existing industry fora and activities are focusing on the areas where improvements are needed. In particular, ICCF Issue #251 established a workshop to develop assignment guidelines for the 640 new NPA codes to be introduced in 1995 through the LRNP.

Many of the perceived problems with the NANPA may be attributed to the lack of industry involvement in the planning process along with the lack of clear guidelines and procedures. This is currently being addressed by the industry through various fora and workshops; e.g., the United States Telephone Association ("USTA") Numbering Planning Subcommittee, The Long-Term Numbering Plan, and workshops sponsored by the ICCF like the COCGF and the N00 Guideline Workshop. While the Commission is undertaking its review, it is imperative that the entire industry participate in these industry fora and voice concerns, issues, and needs. The list of fora in which GTE participates indicates the importance of numbering issues to GTE. These fora are open to members of the telecommunications industry and any industry member that chooses not to participate handicaps itself.

Finally, on an interim basis, until the Commission adopts some new mechanism, the FCC needs to provide a concise designation of authority and responsibility to eliminate ambiguity, confusion, and frustration regarding numbering issues' appeals. As witnessed in ICCF General Session #27, clear and concise designation or limitation of the NANPA's authority is essential. Without such designation, an industry consensus process is destined to fail. The latitude and discretionary authority of the NANPA must be clearly spelled out by the Commission. The assignment criteria used by the NANPA require clear definition. These should not be subjective decisions, there should be clear guidelines, developed across all industry segments, that determine how numbers will be assigned.

If the industry fora cannot reach consensus within the industry, it is important to have a means of resolving the issues. Applying Alternative Dispute

Resolution ("ADR") procedures to situations where the industry cannot achieve consensus is the only established procedure. In the Commission's Initial Policy Statement and Order, GC Docket 91-119[13], the Commission endorsed an initial policy of using the ADR procedure in proceedings in which the Commission is a party. A pilot project to test the process and to work out procedural and administrative details was planned. GTE supported the ADR concept in its ADR Comments.[14] However, there are still many uncertainties associated with ADR as the Commission's planned test has not been done, full ADR procedures are not known, and it is still an "initial" policy.

In the NANPA's Proposal on the Future of Numbering in World Zone 1, the NANPA "recommended that an NANP Advisory Council be formed to advise the NANPA on issues relative to the administration and design of the NANP."[15] The NANPA recommends this council as numbering issues have remained unresolved for long periods of time or have been resolved through other than industry consensus even though an attempt was made to use the industry consensus process. Continuing, the NANPA states: "numbering issues cover the entire spectrum of telecommunications concerns and therefore cannot be

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13 Initial Policy Statement and Order, GC Docket No. 91-119, In the Matter of Use of Alternative Dispute Resolution Procedures in Proceedings in which the Commission is a Party, Released September 30, 1991.

14 See GTE Comments filed June 17,1991, in GC Docket No. 91-119 at 2. ("GTE supports the use of ADR techniques whenever such use is both appropriate in light of the circumstances and consistent with applicable statutory requirements, if any.")

15 North American Numbering Plan Administrator's Proposal on the Future of Numbering in World Zone 1, January 2, 1992, at 27.

completely resolved in any one particular forum."[16] The NANPA's stated position is completely understandable as it often is the recipient of criticism on any numbering problems.

GTE believes that the use of existing industry fora or even a new industry group to set numbering administration policy and establish assignment guidelines would benefit the industry. Bellcore, as the NANPA, would administer the guidelines set by this industry activity which would be required to cover all participants' points of view. The Commission would remain responsible for setting public policy. Use of appropriate industry expertise would focus numbering activities and provide faster industry resolution on important numbering issues.

The only oversight body in the United States should be the Commission. Any other arrangement has the serious potential of delaying the decision-making process to the detriment of the entire industry and the public.

WHO SHOULD FUND NUMBERING ADMINISTRATION?

When the NANPA was established, the industry was composed primarily of wireline carriers and the tremendous growth of wireless communications was not anticipated. At the time of its conception, the NANPA assumed functions previously performed by AT&T before divestiture. This was primarily administering a numbering plan for the wireline network. The wireless segment of the telecommunications industry is now concerned that the NANP is out-dated

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16 Id.

and deals only with wireline issues, ignoring the needs of the wireless carriers. This is one of the criticisms voiced about the NANP and its administration, along with the perception that the RBOCs are given preferential treatment since they own Bellcore and Bellcore provides the NANPA. This is easily understood since the funding of the NANPA is solely by the Bell companies and it is common to assume that any entity gives preference to its owners. To alleviate some of this concern, GTE supports a more definitive structural separation of the NANPA from Bellcore. If the NANPA remains at Bellcore the function should be a new separate subsidiary with different funding arrangements than the rest of Bellcore.

GTE is of the opinion that it is time for the industry as a whole to share in the funding of the NANPA. With funding from the entire industry, structural separation, and oversight from the FCC, there would be less reason to assume that preferential treatment will be given to the RBOCs. Although funding is a difficult issue to resolve, it is important that it be accomplished in a non-discriminatory manner and shared by all industry participants.

The administrative functions currently performed by the NANPA serve the entire telecommunications industry in World Zone 1 and these functions are a vital component of the network infrastructure. Over and above the most visible issues involving NPAs, Service Access Codes (i.e., SACs), and NPA 809 NNX/NXX assignments, the NANPA is involved in such issues as: LRNP; vertical service codes; PCS N00 guidelines; N11 codes; CICs; DNICs; Signaling System 7 ("SS7") point codes; Automatic Number Identification ("ANI") II digits; and number reclamation procedures. These issues affect all segments of the industry in varying degrees. GTE believes that the telecommunications industry as a whole benefits from the administration of the NANP; therefore, the industry

as a whole must support the NANPA's activities without regard to the importance of any one particular issue to any one segment of the industry. The most important function of the NANPA is ensuring the efficient use of a finite resource while supporting emerging technologies and services. Whatever method of funding is selected this function must not be compromised.

The Commission will undoubtedly receive many different suggestions for funding the NANPA. The funding issue addressed in this Phase of the Inquiry should be limited to the operational costs of the NANPA.[17] No matter what methodology is selected by the Commission, the allocation of costs should be crafted such that the perception of influence by any industry segment is removed. For example, if the cost is allocated based on numbers in-service, large carriers would bear most of the costs and may be presumed to have more influence over the administrator because of the relative proportion of financial support. Conversely, an equal charge to all industry participants may financially benefit the large carriers compared to the small regional carriers, fueling a debate over equity. Numbers used may not be the appropriate allocator since in most cases the NANPA does not actually assign a number, but instead makes a NPA code, SAC, or other code available for use. The NPA Administrator makes NXX codes available, and the actual "numbers" are assigned by the service provider. Moreover, a flat-rate charge for numbers could stimulate "warehousing" of numbering resources. Essential considerations that must be accommodated by any methodology selected are: everyone in World Zone 1

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17 The FCC states that: "In this initial review of the NANP we will only consider how the costs of national administration should be handled, including issues relating to the costs of area code administration performed by the NANPA. We will defer any questions related to the costs of office code administration," NOI at para. 35.

benefits from the administration of the NANP; numbers are a limited resource requiring conservation and efficient use; and assignment of a number does not imply "ownership."

PERSONAL COMMUNICATIONS SERVICES AND LOCAL NUMBER PORTABILITY

Additional comments requested by the Commission in Phase One relate to PCS and local number portability. The Commission asks what actions it can take to foster PCS and inquires about the costs and feasibility of local number portability.

Personal Communications Services

GTE is actively involved in national and international forums deliberating PCS and UPT numbering. GTE's position regarding PCS is that all numbers used for PCS be part of the NANP which is how World Zone 1 implemented International Numbering Recommendation E.164. In addition, GTE supports the implementation of draft Recommendation E.168 (referred to as "the application of E.164 for UPT"). In particular, GTE is supportive of the first two numbering scenarios described in E.168. These scenarios are "the home-based plan" and "the country-based scheme." GTE has been unable to see any benefit from either a network provider or a subscriber perspective for the "prefix scheme" which requires the subscriber to dial a prefix before the UPT number. Due to the nature of the prefix, customer confusion and significant network costs to support the recognition and routing of these types of calls will result.

The "home-based plan" represents a methodology which permits companies to offer PCS using today's networks. In this scheme, subscribers can maintain their existing telephone numbers and can be reached regardless of their location within a predefined geographic area, typically their metropolitan area or their entire NPA. The "home-based scheme" relies on the concept of call forwarding which is available in most local telephone exchanges and cellular systems. This scheme supports both limited personal mobility and terminal mobility with the limitation being the predefined geographic area.

The "country-based plan" allows for a larger physical area within which the network has the ability to provide personal and terminal mobility. Within World Zone 1, GTE supports the use of non-geographic numbers, e.g., N00 codes or their equivalent, to permit networks to handle and route PCS traffic. By using NANP resources, subscribers can dial PCS numbers as they do ordinary calls today, but they will be able to recognize the PCS nature of the call by the N00 code. Today's networks can accommodate this implementation of PCS more easily than the prefix method. Also, this numbering scenario supports number portability between carriers with the incorporation of a shared data base similar to the 800 data base presently being implemented by the industry.

GTE believes that PCS providers should have the option to implement their service under either or both of the above plans. However, the PCS provider must recognize that choosing to provide service under either of the plans involves trading off easy identification of the PCS customer's number (from the N00) with achieving 7-digit local dialing parity. For example, adoption of the "home-based plan" will allow local number dialing parity, but the customer's PCS number many not be easily recognized. If the PCS provider chooses the

"country-based plan," local dialing parity may be sacrificed in order to achieve easy recognition of the N00 code of the customer's PCS number.

As GTE stated in its Comments to the NARUC Petition,[18] the issues of PCS and UPT are being addressed by the CCITT, a world standards-making body, and, unless the work of the CCITT Committee shows evidence of results detrimental to U.S. interests, it would be appropriate for the Commission and other domestic regulatory bodies to limit their activity to a monitoring role.

With respect to the assignment of numbers within the N00 PCS code, GTE is supportive of a shared approach to the use of the numbers available (i.e., the incorporation of the concept of "number portability"). Number portability implies that a user can change service providers while retaining the same number assignment(s). The plan for accommodating early roll out of personal communications services is based on the allocation of numbers from an N00 code to be chosen by the NANPA. This requirement for non-geographic numbers has necessitated the development of assignment guidelines for these numbering resources. In its present context, the ICCF N00 PCS workshop is developing numbering assignment guidelines based on providing complete NXX codes to all valid PCS numbering requests. In GTE's opinion, this is the only possible initial approach. It will be necessary to change this approach to a shared-data-base environment in the future. This will be required since the N00 numbers cannot be used efficiently if service provider identification is maintained in the N00 number.

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18 See GTE NARUC Comments at 6.

Another major reason to move to a shared-numbering environment is due to the unfair advantage provided to early entrants into the PCS marketplace. If customers are faced with a number change when changing service providers, they may be less open to alternate service providers due to the inconvenience of changing stationery, advertising, and informing friends and business associates of their new number. This unduly disadvantages the providers of PCS who are not first in the marketplace. GTE is in favor of a competitive environment where all providers have access to customers and customers can change providers and maintain the same number(s). The continued assignment of numbers containing service provider identification leads to an unlevel playing field for the provision of PCS.

A single N00 code has 792 available Central Office (NXX) codes. This limitation severely restricts the PCS service provider market. USTA's membership of over 1,400 telephone companies, CTIA's membership of nearly 500 cellular carriers, many potential small PCS providers within Telocator, competitive access providers ("CAPs"), and other enhanced service providers ("ESPs") who may wish to provide PCS will be disadvantaged since not all companies will be able to offer PCS due to a lack of numbers. It becomes obvious that the maximum number of 792 potential providers is inadequate.

The assignment of an entire NXX code to a PCS service provider could lead to inefficient usage of N00 numbering if a PCS provider does not use all 10,000 numbers in a given NXX code. This situation exists today in the local exchange environment where NXX codes assigned to particular geographic locations will never utilize all the available numbers. It also exists to a lesser extent in the cellular industry and is not exclusive to LECs and cellular carriers. Only in a shared-data-base environment is it possible to use these numbers

efficiently. A shared data base permits the assignment of any number to any service provider, thus, eliminating unassigned numbers. If there are no other options available, GTE accepts that NXX code assignment is the only way that non-geographic PCS numbers can be assigned initially.

The Commission's direction given to the industry regarding the implementation of the shared 800 data base and number portability indicates a regulatory goal towards which the industry should strive. In GTE's opinion, the industry would be negligent in not incorporating the shared data base concept in the N00 PCS numbering assignment guidelines. GTE recommends that the guidelines be written for a shared-data-base environment noting that NXX codes will be assigned, as an interim measure, so as not to deny the public access to numbering resources. However, the guidelines should include the methodology to utilize and obtain numbers from a shared data base as soon as the necessary equipment and technology are available. The guidelines should also state that any NXX codes initially obtained should be subject to recall for use in a shared-data-base environment.

A lack of number portability will prove to be a great inconvenience to PCS customers. If customers must be tied to a particular PCS provider because of number assignments, this could discourage potential customers from PCS subscription. Also, it will negatively impact both users and providers. Customers are used to keeping their phone numbers when changing long-distance providers and shortly will get used to 800 number portability via the shared 800 data base. PCS, out of necessity, will need to demonstrate an equivalent capability.

Local Number Portability

Local number portability is a network capability that allows a customer to receive calls at a defined location within a local area using a phone number that is independent of the service provider. As with PCS, this capability can be provided using either geographic or non-geographic numbers. Today, geographic numbers bear the identification of the location associated with a specific switch while a non-geographic number indicates a service instead of a location. Today's environment is primarily one of geographic numbers where the routing, rating, and network architecture are tied to a local carrier-specific geographic identification process.

For local number portability, the special Area Code concept cannot be used since that requires a customer to change numbers. To provide local number portability, all numbers must be non-switch associated which requires data base look-up on all calls. This requirement may exceed the capability of the existing SS7 networks. If another signaling network and data base are used, the bandwidth of the network and the size of the data base would have to be determined and reliability ensured. To provide complete number portability, all numbers must be non-switch associated.

This implementation requires 7 digit translation on all local calls at the outgoing switch. In some areas where the local call crosses NPA boundaries or where NPA overlays have occurred, 10 digit translation may be required as is the case in PCS (N00 NXX-XXXX). This complicates the implementation of local number portability and increases the cost. Several network architectures are candidates for the provision of local number portability; however, all require modifications to switch hardware and software. These modifications are difficult,

if not impossible, for certain vintage switches: electromechanical; crossbar; and early stored-program control. In addition, new signaling capabilities may be required for switch-to-switch and switch-to-data base communication. The reliability and bandwidth of the signaling network, the size of the data base, and the speed of the data base query have not been analyzed in sufficient detail to provide definite requirements at this time.

As the Commission notes in the NOI, "Competitive access providers argue that the inability of customers to change carriers without changing telephone numbers provides a barrier to local competition."[19] This may be true, but the industry is not in a position at this time to provide either full geographic or non-geographic local number portability. It requires further analysis and planning before it can be implemented. In the meantime, limited number portability is provided with call forwarding and the ability to change interexchange carriers without a number change. GTE agrees that local number portability is extremely attractive to both customers and competitive local access providers and is aware that in the future it will be available. The industry must be allowed to develop this functionality in a timely manner in order to avoid prohibitive costs and network inefficiencies.

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19 NOI at para. 41.

(PHASE TWO OF THE NOI)

FEATURE GROUP D ACCESS CODES

"In the past, rather than rationing codes or taking other approaches, the number of codes has been expanded as exhaustion approached."[20] This statement by the Commission is very appropriate as this method now necessitates the expansion of FGD CICs. As with any expansion effort, planning and implementation is a lengthy process. Recognizing this, the Commission is addressing the implementation of expanded FGD CICs in Phase Two of this NOI.

CICs are numeric codes used for routing and billing between a LEC and an access purchaser. The CIC comprises part of the Carrier Access Code ("CAC"). In today's environment, the CAC for FGD is in the format of 10XXX with XXX being the CIC. The expansion of CACs from the 10XXX format to 101XXXX is scheduled for 1st Half of 1995. This expansion raises feasibility questions within the entire industry. From a LEC perspective, it is technically difficult and costly. From an interexchange carrier ("IXC") perspective, it requires customer retraining and the dialing of a 7-digit access code. Additionally, for those IXCs using both FGB and FGD CICs, there is no guarantee that their CICs will be the same for both as different pools of numbers will be established.

There are 969 CICs available for FGB and FGD assignment using the present 10XXX format. When this format was established, exhaustion was not

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20 NOI at para. 38.